

REMARKS

Claims 1, 3-5, 9, 12, 14-16, and 20-24 are pending in the present application. Claims 2, 6-8, 10, 11, 13, and 17-19 are canceled. Claims 1, 12, and 20 are amended to incorporate the features of claims 2 and 13. Claims 5 and 16 are rewritten in independent form. Claims 9 and 21 are amended to incorporate the features of claims 5 and 16. Claims 22-24 are added. Reconsideration of the claims is respectfully requested.

I. 35 U.S.C. § 102, Anticipation

The Office Action rejects claims 1 and 2 under 35 U.S.C. § 102 as being anticipated by IBM Technical Disclosure Bulletin, Vol 37, Issue #3, pages 205-206 ("IBM TDB" hereinafter). This rejection is respectfully traversed.

The IBM Technical Disclosure Bulletin (TDB) states:

A method for detecting tape cartridges inadvertently placed upside-down in a storage cell within an automated tape library is disclosed. – Utilizing a barcode reader already present in the library for the purpose of scanning tape cartridge labels, the barcode reader has been enhanced to report not only the cartridge label but also the orientation of the label, that is, whether it was read with a forward scan or a reverse scan. Knowledge of the label orientation allows the automated tape library system to know if the cartridge label is upside-down or right-side-up. The automated tape libraries can then take appropriate action if the label is upside-down. [emphasis in the furnished copy]

Thus, the IBM TDB teaches determining label orientation based only on whether the barcode is read with a forward scan or a reverse scan.

In contradistinction, the present invention determines whether a cartridge is correctly oriented based on a **location** of a barcode or **orientation of characters** on the label. Claim 1 is amended to include features previously presented in claim 2. Claim 1 recites:

1. A method for detecting incorrect cartridge orientation in an automated media library, comprising:
reading label information from a cartridge label on a cartridge; and

determining whether the cartridge is correctly oriented based on the label information, wherein the label information comprises at least one of a location of a barcode and orientation of characters on the label.

The IBM TDB does not teach or suggest "determining whether the cartridge is correctly oriented based on the label information, wherein the label information comprises at least one of a location of a barcode and orientation of characters on the label," as recited in claim 1 and earlier presented in claim 2 (now canceled). The applied reference fails to teach or suggest each and every claim limitation; therefore, claim 1 is not anticipated by the IBM TDB.

Therefore, the rejection of claim 1 under 35 U.S.C. § 102 is overcome.

Furthermore, the IBM TDB does not teach, suggest, or give any incentive to make the needed changes to reach the presently claimed invention. The IBM TDB actually teaches away from the presently claimed invention because it teaches determining label orientation based upon scan direction regardless of barcode location and orientation of characters, as opposed to the method in the presently claimed invention. Absent the Office Action pointing out some teaching or incentive to implement the IBM TDB for determining cartridge orientation based on barcode location or orientation of characters, one of ordinary skill in the art would not be led to modify the IBM TDB to reach the present invention when the reference is examined as a whole. Absent some teaching, suggestion, or incentive to modify the IBM TDB in this manner, the presently claimed invention can be reached only through an improper use of hindsight using the Applicant's disclosure as a template to make the necessary changes to reach the claimed invention.

II. 35 U.S.C. § 103, Obviousness

The Office Action rejects claims 3-21 under 35 U.S.C. § 103 as being unpatentable over *Ellis et al.* (US Patent No. 4,450,385) in view of IBM TDB. This rejection is respectfully traversed.

As to claims 3-21, the Office Action states:

Ellis, filed in August 1993 discloses a method of determining the status of cassettes in a tape library wherein the presence, or absence of cartridges is noted, in addition to whether the number is unreadable. Ellis doesn't teach procedures for identifying upside down labels. IBM teaches a procedure for dealing with upside down labels, and taking appropriate

action. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to include the procedure for determining upside down labels of the IBM disclosure in the *Ellis* disclosure, because the bar code reader can be "enhanced" to report this information, thus detecting inadvertent placements of the cartridges upside-down. The appropriate "corrective action" suggested by IBM is pretty clearly spelled out in *Ellis*.

Office Action, dated March 24, 2003. Applicant respectfully disagrees. *Ellis* teaches determining status of storage cells in an automated storage and retrieval system. *Ellis* teaches scanning each cell in a storage and retrieval system (step 704). A determination is made as to whether a mark is detected (steps 706, 724). *Ellis* does not teach or suggest determining an orientation of a label. Rather, *Ellis* only determines whether a label is detected or not detected and whether the label is for a cartridge or for an empty cell. If no mark is detected, a gripper mechanism is used to check the cell (step 726) and attempt removal (step 736). If an object is detected (step 728) and the removal is unsuccessful (step 736), the cell is marked as "invalid" (step 730).

The IBM TDB does teach determining label orientation based on whether a barcode is forward scanned or reverse scanned. However, as discussed above with respect to claim 1, the IBM TDB does not teach or suggest determining whether a cartridge correct based on barcode location or character orientation on the label. Many barcodes are symmetrical. In other words, these barcodes read identically whether they are scanned forward or in reverse. If symmetrical barcodes are used, the IBM TDB would not be able to determine label orientation. On the other hand, the present invention determines cartridge orientation based on a location of a barcode or orientation of characters on the label. Therefore, the present invention, as recited in claims 1, 3, 4, 12, 14, 15, and 20, is equally as effective when symmetrical barcodes are used.

Thus, while the IBM TDB teaches determining label orientation, the reference does not teach or suggest the specific manner in which cartridge orientation is determined in the instant claims. Furthermore, *Ellis* does not spell out any "corrective action," because *Ellis* does not even mention label orientation. The IBM TDB does not solve any problem or disadvantage associated with *Ellis* and *vice versa*. The applied references, taken alone or in combination, fail to teach or suggest each and every claim limitation.

Therefore, claims 3, 4, 12, 14, 15, and 20 cannot be rendered obvious by a combination of *Ellis* and the IBM TDB.

Independent claims 12 and 20 recite subject matter addressed above with respect to claim 1 and are allowable for the same reasons. Since claims 3, 4, 14, and 15 depend from claims 1 and 12, the same distinctions between *Ellis* and the IBM TDB and the invention recited in claims 1 and 12 apply for these claims. Additionally, claims 3, 4, 14, and 15 recite other additional combinations of features not suggested by the reference.

Representative claim 5 recites:

5. A method for detecting incorrect cartridge orientation in an automated media library, comprising:
 - reading label information from a cartridge label on a cartridge;
 - determining whether the cartridge is correctly oriented based on the label information;
 - performing a retrieval operation on the cartridge responsive to the cartridge not being correctly oriented based on the label information; and
 - marking the cartridge as incorrectly oriented if the retrieval operation is not successful.

Ellis teaches using a gripper to physically check a cell and attempt removal only when a mark is not detected. *Ellis* does not teach or suggest “performing a retrieval operation on the cartridge responsive to the cartridge not being correctly oriented based on the label information,” as recited in representative claim 5. The IBM TDB does not make up for this deficiency. Therefore, a combination of *Ellis* and the IBM TDB cannot render claim 5 obvious.

Claims 9, 16, and 21 recite subject matter addressed above with respect to claim 5 and are allowable for the same reasons. Since new claims 22-24 depend from claims 5, 9, and 16, the same distinctions between *Ellis* and the IBM TDB and the invention recited in claims 5, 9, and 16 apply for these claims. Additionally, claims 22-24 recite other additional combinations of features not suggested by the reference.

Therefore, the rejection of claims 3-21 under 35 U.S.C. § 103 is overcome.

III. Conclusion

It is respectfully urged that the subject application is patentable over the cited art and is now in condition for allowance.

The Examiner is invited to call the undersigned at the below-listed telephone number if in the opinion of the Examiner such a telephone conference would expedite or aid the prosecution and examination of this application.

DATE: June 24, 2003

Respectfully submitted,



Stephen R. Tkacs
Reg. No. 46,430
Carstens, Yee & Cahoon, LLP
P.O. Box 802334
Dallas, TX 75380
(972) 367-2001
Agent for Applicants

FAX RECEIVED

JUN 24 2003

TECHNOLOGY CENTER 2800